Sundarbans with the same affinity are the masked finfoot, and not to forget the Javanese rhino among the exterminated Sundarbans mammals. More careful observations in future will surely bring forth other interesting discoveries from the Indian and Bangladesh Sundarbans. Mar. 23, 2001 GERTRUD NEUMANN-DENZAU HELMUT DENZAU Im Brook 8, 2 4321 Panker, Germany. Email: denzau@t-online.de

References

- ALI, S. & S.D. RIPLEY (1969): Handbook of the Birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Sri Lanka. Oxford University Press, Bombay, Vol. 3.
- BAKER, E.C.S. (1927): The Fauna of British India. Taylor and Francis, London, Vol. 4: 410-411.
- DEL HOYO, J., A. ELLIOTT & J. SARGATAL (EDS) (1999): Handbook of the Birds of the World. Lynx Edicions, Barcelona, Vol. 5 (Buffy fish-owl : 194).
- GRIMMETT, R., C. INSKIPP & T. INSKIPP (1998): Birds of the Indian Subcontinent. Christopher Helm, London.

HUSSAIN, Z. & G. ACHARYA (1994): Mangroves of the

Sundarbans. Vol. 2. Bangladesh, IUCN, Bangkok. Pp. 248.

- KHAN, M.A.R. (1986): Wildlife in Bangladesh Mangrove Ecosystem. J. Bombay nat. Hist. Soc. 83: 32-48.
- KOENIG, C., F. WEICK & J.H. BECKING (1999): Owls, A Guide to the Owls of the World. Pica Press, Sussex, pp. 309-310 + pl. 33.
- PAYNTER, R.A. (1970): Species with Malaysian affinities in the Sundarbans, East Pakistan. *Bull. Brit. Orn. Club 90(5)*: 118-119.
- STEVENS, H. (1915): Notes on the Birds of Upper Assam, Part 2. J. Bombay nat. Hist. Soc. 23: 547-570 (Malay Fish Owl: 560).

26. A NOTE ON THE CIRCUMORBITAL SKIN COLOUR OF INDIAN GREY HORNBILL OCYCEROS BIROSTRIS

On August 8, 2000, I was attracted by the calls of Indian grey hornbills Ocyceros birostris (Scopoli) from a large fruiting pipal Ficus *religiosa* Linnaeus, in my garden in Hyderabad. This was the third consecutive day that I was watching this trio of 2 males and 1 female. It was obvious they were courting, for the males displayed and postured with upright body and bill pointed skyward. While doing so, the feathers above their tarsi were puffed up, like small balls of white cotton. Their white-tipped tails were constantly and rhythmically pumped in an arc (swung like a pendulum if the birds were viewed in profile) from their normal positions, inwards. Their loud calls resounded through the garden. Males uttered a shrill and quavering squeal, while the female's call was a clearer and louder, nasal "wheeeee". The birds also uttered a ratchety "k-k-k-k-k-k-krrr" (maybe only male) as they moved upward, towards the top of the tree. All three birds hopped and clambered about in the tree, using their bills to pull themselves up at times, plucking and eating figs as they proceeded. Twice a male hopped along a branch towards the female and acted as if he was going to feed her, though no item of food was passed.

I got a very good view of all three as they moved about. I noticed almost immediately that the circumorbital skin on the female was a rich dark orange and her irides were dark brown. Both the males had black circumorbital skin and orange irides. While the colours of these soft and bare parts of a male are recorded in published literature (Ali and Ripley 1987, Baker 1927, Kemp 1995, Roberts 1991), there is no mention of the circumorbital skin colour of a female Indian grey hornbill (Kemp 1995).

On August 29, 2000, I was in Mumbai and took the opportunity to check the specimens in

the collection of the Bombay Natural History Society. I examined 11 females, of which 9 had clear orange skin around the eyes. The circumorbital skin colour was not clear on specimen # 11447, collected by P.T.L. Dodsworth on 13.i.1913 from Karka, N.W. Himalayas. A remark on the tag read, "Irides reddish-brown." Specimen # 11450, collected by V.S. Lapersonne on 29.v.1929 from Chitteri Range, Salem at 2,000, was marked as a female and had a quarter moon-shaped orange area below the eye. This specimen also had a relatively more prominent casque than that of the others.

It is, however, possible that the colours of bare skin and irides may vary according to the emotional state of the bird and the resulting endocrinal secretions. Outside of the breeding season, probably the bare skin of both sexes may well be dark grey to black, and that of the female

ALI, S. & S.D. RIPLEY (1987): Compact Handbook of the Birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Sri Lanka. 2nd edition, Oxford University Press, Delhi. Pp. 292.

BAKER, E.C. STUART (1927): The Fauna of British India including Ceylon and Burma. Birds. Vol. IV, 2nd changes only during courtship and times of excitement.

The shape of the casque, the extent of yellow on the bill, and the colour of the irides are used to separate sexes of the Indian grey hornbill in the field. These field-marks can now be supplemented by the differences in their circumorbital skin also.

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REFERENCES

edition. Taylor and Francis, London. Pp. 301-302. KEMP, ALLAN (1995): The Hornbills. Oxford University Press, Oxford. Pp. 157-159.

ROBERTS, T.J. (1991): The Birds of Pakistan. Vol. 1. Regional Studies and non-Passeriformes. Oxford University Press, Karachi. Pp. 532-534.

27. SIGHTING OF MALABAR PIED HORNBILL ANTHRACOCEROS CORONATUS IN SANJAY GANDHI NATIONAL PARK, MUMBAI

On July 30, 2000, during a walk in the Sanjay Gandhi National Park (SGNP), Mumbai, at 0845 hrs we stumbled upon a noisy flock of Indian grey hornbill *Ocyceros birostris*. There were four individuals to our left, coursing restlessly through the thick canopy about 40 m away. We were at an elevation and the birds, though about 10 m from the ground were exactly level with us. While we were contemplating the reason for such aggressive behaviour, another much larger and darker bird emerged from the thick cover. It was still partly hidden and difficult to identify, but as soon as it alighted from a tall *Adina cordifolia* tree, the white trailing edge on its predominantly black wings and white outer tail feathers disclosed its true identity. The bird being mobbed by the four Indian grey hornbills was the Malabar pied hornbill *Anthracoceros coronatus*. Soon, *A. coronatus* was chased away by the four birds and the flock disappeared into the canopy.

However, within five minutes these noisy hornbills returned to the same area, but perched slightly closer to us. This time there were two *A. coronatus*. One bird was identified to be a female from the absence of the black patch at the posterior end of its casque, while the sex of the other bird could not be determined. The four *O. birostris* always kept a close vigil, but never advanced too close to the larger species.